

# AIRSTREAM

Product Line: Models Utilizing Catcon Monitor  
Subject: CATCON Monitor System Calibration

The 2004 model year introduces a new monitoring system for all motorhome and trailers. This guide explains its operating and calibration procedures.

Micropulse Systems Monitor  
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The MicroPulse System makes use of a single solid-state sensor per tank. The MicroPulse sensor measures the static (head) pressure at the bottom of the tank and transmits this information to the MicroPulse System Monitor. Knowing this pressure value, after a one-time calibration has been performed, the MicroPulse System will calculate and accurately display the tank level in 1/8 increment.



A single sensor is installed near the bottom of the sidewall of each tank or in the 3-inch dump valve plumbing via a 3/4" female NPT spin-in thread. The sensor is solid state, there are no moving parts to wear or maintain. Because the principle of operation does not involve any electrical current flow through the tanks contents (conducted or induced), the nature of the fluid in the tank is unimportant.

The monitor system has been calibrated at the factory and should never need another calibration. If you feel the system is not operating correctly, please contact CATCON Products using the phone number or email above or Airstream Factory Customer Service. The following instructions are provided for qualified service technicians.

## MONITOR WIRE CONNECTIONS

Red	12VDC, Battery Only
Black	Ground, Battery Only
Purple	Water Pump, 15A, 12VDC
White	LPG Sensor, 90 ohm
Fresh	Fresh Tank Sensor
Gray 1	Gray 1 Sensor
Gray 2	Gray 2 Sensor (not used)
Black	Black Sensor

## MICROPULSE SYSTEMS MONITOR OPERATION INSTRUCTIONS

This example shows the monitor reporting the following:

Fresh Water = 1/8 to Empty  
Gray Water 1 = Empty to 5/8  
Gray Water 2 = 3/4  
Black Water = Empty to 5/8  
LP Gas = 1/4  
Battery = Empty to 5/8

**On all diagrams the Letters R=Red, Y=Yellow, G=Green, Blank=no LED lit.**

### NORMAL OPERATION

The MicroPulse Monitor will display the condition of each system at all times. The tri-color LED beside the system will indicate the condition of the system using the following color code.

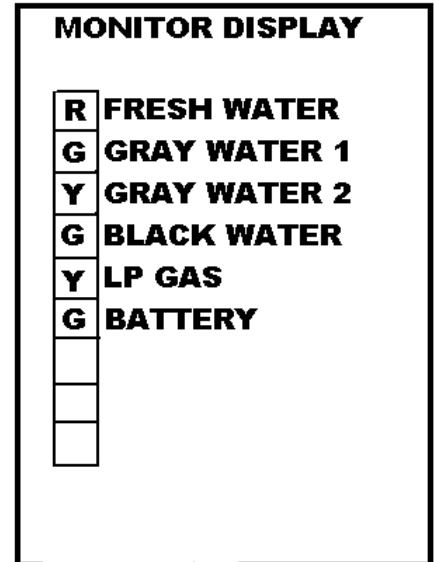
Fresh Water, LP Gas, Battery are as follows:  
Green LED = 3/8 to Full  
Yellow LED = 1/4  
Red LED = 1/8 to Empty

Gray Water, Black Water are as follows:  
Green LED = Empty to 5/8  
Yellow LED = 3/4  
Red LED = 7/8 to Full

### TO OBTAIN EXACT READING

To obtain an exact reading of all systems press and release the status button one time. The monitor will flash the LED beside the system it is about to report. It will then display the exact condition of that system by lighting the bar graph from Empty to Full. The monitor will display the exact condition of each system and then return to normal operation mode.

To obtain an exact reading of an individual system press and release the status button until the LED beside the system that you want the condition of is lit. Release the status button and the monitor will display the exact condition of that system by lighting the bar graph from Empty



## MICROPULSE SYSTEMS MONITOR CALIBRATION PROCEDURE

### STEP 1

Action: Turn the power on.

Result: Display will flash all yellow 1 time, flash all green 5 times and then display all green. This confirms that the monitor is in the calibration mode. Proceed to step two.

Display after completion of step one.

**On all diagrams the Letters R=Red, G=Green, Y=Yellow, Blank=no LED lit.**

MONITOR DISPLAY	
G	FRESH WATER
G	GRAY WATER 1
G	GRAY WATER 2
G	BLACK WATER
G	LP GAS
G	READY FOR FULL
G	READY FOR EMPTY
G	SELECT TANK
G	DIAGNOSTICS

### STEP 2

Action: Press and release the status button one time.

Result: This enters the monitor into diagnostics. Display will light the Fresh Water, Gray Water 1, Gray Water 2, Black Water, and LP Gas. The Diagnostic LED will light green. If a sensor is installed and is working correctly, the LED beside the system will light green. If a sensor is not installed or is not connected, the LED beside the system will display yellow. **If a system LED displays yellow, it will not be included in the calibration routine.** The most likely cause is the RJ11 connectors are not installed correctly or the sensor is not plugged in. When all installed systems are displaying a green LED, proceed to step 3.

Display after completion of step 2.

**On all diagrams the Letters R=Red, G=Green, Y=Yellow, Blank=no LED lit.**

MONITOR DISPLAY	
G	FRESH WATER
G	GRAY WATER 1
Y	GRAY WATER 2
G	BLACK WATER
Y	LP GAS
	READY FOR FULL
	READY FOR EMPTY
	SELECT TANK
G	DIAGNOSTICS

**STEP 3**

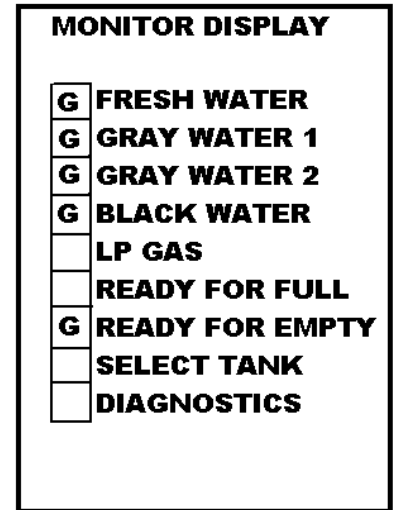
Action: Press and release the status switch 1 time.

Display will light Fresh Water, Gray Water 1, Gray Water 2, Black Water, and Select Tank LED's green. After 2 seconds, the Select Tank LED will turn off and the ready for empty LED will turn light green. Proceed to step 4.

On all diagrams the Letters R=Red, Y=Yellow, Blank=no LED lit.

Display after completion of step 3.

On all diagrams the Letters R=Red, G=Green, Y=Yellow, Blank=no LED lit.



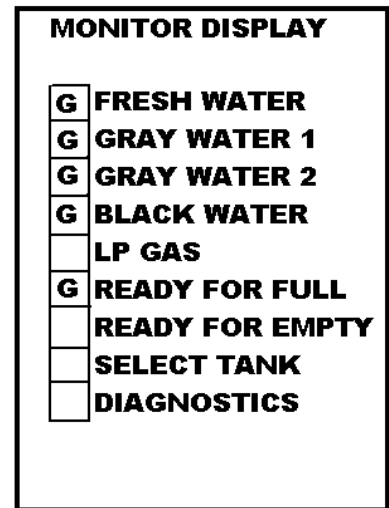
**STEP 4**

Action: Fill all water holding tanks to the level that you want the monitor to report empty. Minimum suggested is liquid just covering the sensor. When all tanks are set to the desired level press and release the status button 1 time.

Result: Display will go blank for a few moments while the empty values are being read. When the system has completed reading the empty values Fresh Water, Gray Water 1, Gray Water 2, Black Water, and the Ready For Full LED's will light green. Proceed to step 5.

Display after completion of step 4.

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**STEP 5**

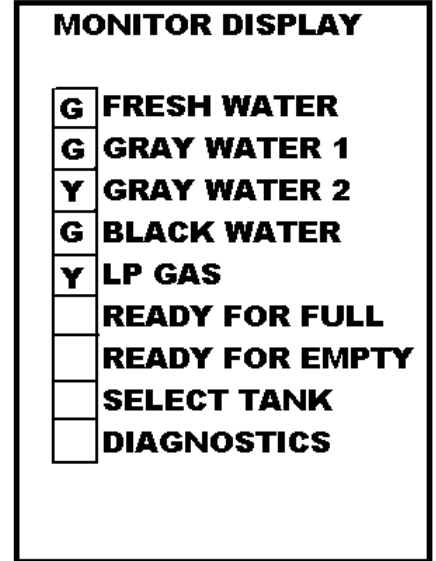
Action: Fill all tanks to the level that you want the monitor to report full. Maximum suggested is liquid about 1 inch below the top of the tank and the maximum is 4 inches above the empty level. When all tanks are set to the desired level press and release the status button 1 time.

Result: Display will go blank for a few moments while the full values are being read. When the system has completed reading the full values Fresh Water, Gray Water 1, Gray Water 2, Black Water, and LP Gas will light. All other LED's will turn off. If a system has passed calibration the LED beside it will light Green. If a system was not installed, the LED beside it will light yellow and that system will not be reported in normal operation. If a system fails calibration the LED beside it will light red and that system will not be reported in normal operation. In the event that a system fails calibration, turn off the monitor and repeat calibration procedure. The most likely cause for a failure is that the full level was not set the minimum of 4 inches above the empty level. If all installed systems display a green LED, proceed to step six.

In this example Fresh, Gray 1, and Black have passed calibration. Gray Water 2 and LP Gas were not installed and therefore they will not be reported in normal operation.

Display after completion of step 5.

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**STEP 6**

Action: Remove the calibration decal on the lower 4 LED's. Press and release status button 1 time.

Result: Display will turn red from empty to full 1 time, turn green from empty to full 1 time, and all flash green 1 time. Power on greeting will be played and installed tank levels will be displayed.

**Calibration is complete**